CAST IRON FIREPLACE

LEDRO (JA064) / MALVENO (JA059)

ASSEMBLY & OPERATING INSTRUCTIONS

Important: Read these instructions for use carefully so as to familiarize yourself with the appliance before connecting it to its gas container. Keep these instructions for future reference. Megamaster reserves the right to make changes to this manual without prior notice.

www.megamaster.co.za

Manufactured in China · Distributed by Mega Group · PO Box 15, Woodlands, 0072, South Africa · Tel: +27 (0) 12 802 1515

INTRODUCTION

Thank you for purchasing this Megamaster Cast Iron Fireplace. Before attempting to install or use the fireplace, please read this manual throughout and follow the instructions carefully. Thoroughly familiarize yourself with this fireplace & it's operation in order to ensure the safety of yourself and others around you. Henceforth, you can look forward to the fireplace giving you long and satisfactory service. This fireplace is a "multi-fuel" unit and can burn a variety of solid fuels such as wood, coal, anthracite and various briquette formed fuels.

GUARANTEE

Megamaster Cast Iron Fireplaces are guaranteed for a period of **10 years** from original date of purchase. The guarantee will cover all manufacturing and material defaults. Removable and replaceable working components will be covered for a **12-month** period from the original date of purchase. A copy of the proof of purchase must be kept to validate any claims.

The conditions of this warranty are subject to the correct assembly, installation, safe-operating, cleaning and maintenance conditions as prescribed within this user manual. Failure to comply with the instructions of this user manual will render the guarantee null and void.

The following is not covered by this guarantee:

1. **Glass Panel**
2. **Rope and gasket seals**
3. **Paint discoloration (irrespective of the period after purchase)**
4. **Rust and rust related problems (irrespective of the period after purchase)**

Megamaster reserves the right to either repair or replace any fireplaces or components at their discretion. Megamaster will not be held accountable for any loss or damaged of any kind suffered due to the incorrect installation or operating of this fireplace. Costs associated with the replacement or repair will be covered by the guarantee for the first 12 month.

This guarantee is not transferable and applies to all residents within South Africa, Botswana and Namibia. Other countries will be considered on discretion of Megamaster.

For any general quires regarding the conditions of this guarantee, please contact Megamaster.

Please note that details and specifications contained herein are correct at the time of going to print. All data is applicable to wood burning use only. Megamaster reserves the right to change specifications at any time without prior notice.

PRODUCT SPECIFICATION

Product	LEDRO (JA064)	MALVENO (JA059)
Overall Sizes (mm)	(W) 680 * (D) 420 * (H) 680	(W) 410 * (D) 355 * (H) 600
Weight (kg)	135	115
Heat Output (kW)	16	10
Flue Outlet	Top or Rear	Top or Rear
Glass Size (mm)	283 x 288	380 x 238
Flue Size (mm)	150	125

INSTALLATION OF THIS PRODUCT

WARNING!

AN ACCREDITED FIREPLACE INSTALLER SHOULD CARRY OUT THE INSTALLATION OF THIS FIREPLACE. ALTERNATIVELY, SHOULD A NONACCREDITED INSTALLER UNDERTAKE THE INSTALLATION, YOUR LOCAL BUILDING CONTROL OFFICER WILL BE REQUIRED TO APPROVE THE COMPLETED INSTALLATION. IF THE FIREPLACE IS NOT FITTED CORRECTLY, BY AN ACCREDITED PERSON OR OUTSIDE THW SCOPE OF THIS MANUAL IT COULD RESULT IN A HOUSE FIRE OR CARBON MONOXIDE POISONING.

READ ALL THE INSTRUCTIONS CAREFULLY BEFORE INSTALLATION

The instructions cover the basic principles to ensure satisfactory installation of the fireplace, although details may need a slight modification to suit particular site conditions. In all cases the installation must comply with current Local Authority Byelaws.

This guidance information in no way replaces your responsibility as an installer or end user to comply with the appropriate standards.

SAFETY WARNINGS FOR YOUR GUIDANCE

THIS FIREPLACE WILL BE HOT when in operation and due care should be taken. Thick gloves should be used to operate the primary/ secondary controls or reaching inside the fireplace to position fuel or remove ash.

FIRES CAN BE DANGEROUS - Always use a fireguard in the presence of children, the elderly or the infirm.

DO NOT OVERFIRE - it is possible to fire the fireplace beyond its design capacity. This could damage the fireplace, so watch for signs of over firing - if any part of the fireplace starts to glow red, the fireplace is in an over fire situation and the controls should be adjusted accordingly. Never leave the fireplace unattended for long periods without first adjusting the controls to a safe setting. Careful air supply control should be exercised at all times.

THIS FIREPLACE MUST BE CONNECTED TO A SUITABLE FLUE OUTLET. **Due to high temperature this fireplace should be located well away from furniture and curtains. Children and adults should be alerted to the hazards of hot surfaces. Young children should be carefully supervised when they are in the same room as the fireplace. Do not place clothing or other flammable material on or near the fireplace. Keep the fireplace area clear of combustible materials, flammable liquids or vapors.**

CARBON MONOXIDE POISONING CAN BE FATAL. Due consideration should be given to the dangers of carbon monoxide poisoning following incomplete combustion of solid fuels in an enclosed space. See page 14 in this booklet. Ensure the room were this product is installed is well-ventilated, additional air bricks may need to installed to allow for a source of permanent ventilation.

GENERAL SAFETY RULES

1. **ALWAYS** read and understand the manual before installing and commissioning the fireplace.
2**. ALWAYS** ensure the fireplace is installed in accordance with local regulations.
3**. ALWAYS** ensure that the fireplace is correctly installed and positioned as described **in the diagram** on page 7, and that the immediate area is kept clear.
4. **ALWAYS** check for damage before using the fireplace. Check for breakage of parts and any other condition that may affect the fireplaces performance. Any damage should be properly repaired or the part replaced. If in doubt, **DO NOT** use the fireplace. Consult your local dealer.
5. **ALWAYS** keep children and visitors at a safe distance from the fireplace.
6**. NEVER** direct any kind of liquid on to the fireplace, particularly when it is hot.
7. **NEVER** use gasoline or other flammable liquids for fire starting.
8. **NEVER** use the fireplace to incinerate materials other than recommended fuels.
9. **NEVER** carry out any modifications to this product. If experiencing difficulty of any kind consult your local dealer.
10. The installation of the fireplace and chimney **MUST** comply with all local building regulations. It is the responsibility of the owner and the installer to ensure that the installation complies.
11. All rooms where a fireplace is situated must have a non-motorized air vent (air brick). Refer to details contained in the Building Regulations.

UNPACKING & ASSEMBLY

UNPACKING
Before assembling, please check contents against the following list and advise your dealer immediately if any parts are missing.

TOOLS REQUIRED
- Phillips screwdriver
- Adjustable spanner
- Fire Cement

ASSEMBLY

You can either:
• Use a registered installer who can self certify that the work he does complies with the relevant Building Regulations; or
• The consumer applies to their local authority building control department for a building notice, and pays the appropriate fee.

It is generally worthwhile to use an accredited installer who will supply a Certificate of Compliance as a record of the job and that it complies with Building Regulations.

SUPPORTING FLOORS

The fireplace must only be installed on floors with an adequate load bearing capacity and if the existing construction is not suitable, additional measures such as a load distributing plate must be provided. The hearth should be able to accommodate the weight of the fireplace and its chimney if the chimney is not independently supported.

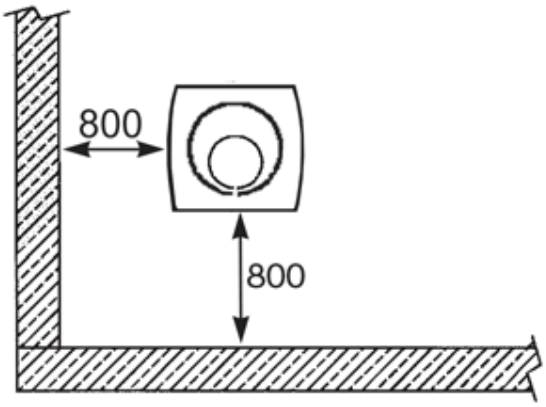
Fireplaces should stand wholly above hearths made of non-combustible board/sheet material or tiles at least 12mm thick, if the fireplace is not to stand in a recess and has been tested to an applicable standard to verify that it cannot cause the temperature of the upper surface of the hearth to exceed 100^{o}C.

Constructional hearths should be made of solid, non-combustible material such as concrete or masonry, at least 125mm thick, including the thickness of any non-combustible floor and/or decorative surface. A additional 400mm hearth gap should be provided in front of the fireplace incase logs, coals or other burning or hot objects fall from the fireplace when the door is opened.

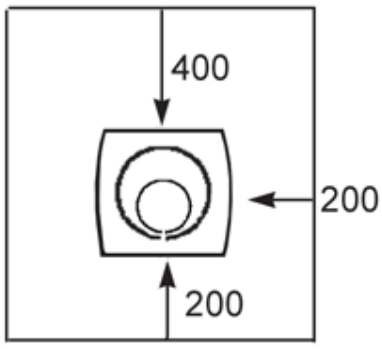
Specific guidance for surfaces on which the fireplace may be allowed to stand should be of ceramic or concrete construction. When the fireplace is positioned near a wall constructed of flammable material, the distances shown on Fig 5 must be adhered to. Alternatively, a heat shield may be used, mounted according to the position of the fireplace. A firewall must be at least 100mm thick and typically made of brick, or concrete/stone.

MATERIAL CLEARANCES

The fireplace must have a minimum clearance of 1200mm to a combustible ceiling above.



Min distance to combustible Wall



Floor Protector
Minimum Size (mm)

It is recommended that the fireplace be installed at least 800mm from combustible materials. However, any household furnishings should be at least 1000mm away as they could be adversely affected by heat.

The fireplace can be recessed in a suitable sized fireplace but a permanent free air gap of at least 200mm must be left around the sides and top and at least 50 mm at the back of the fireplace to obtain maximum heat output and for access to the rear of the fireplace.

MINIMUM DISTANCE TO COMBUSTIBLE MATERIALS

Note: combustible material refers to any material that will degrade when subjected to heat e.g. plaster. Due to the heat of a hot fireplace, a suitable fireguard should always be used to provide additional protection. Never allow young children to be left unsupervised in a room containing a hot fireplace.

THE CHIMNEY

The fireplace is supplied with a flue pipe connector for top mounting with the fixing screws supplied. The fireplace should never be connected to a shared chimney/flue system.
Flue pipes with a smaller cross-sectional area than that of the fireplace outlet should never be used. Flue pipes must not project into the chimney connector, such as to cause a restriction to the gas flow.

The minimum size for a masonry chimney (not flue) is 150mm in diameter. A larger chimney size can affect the performance of the fireplace.

1. Fireplaces under 20kW rated output that low volatile fuel requires a minimum flue size of 125mm diameter (or rectangular flues having the same cross-sectional area) and a minimum dimension not less than 100 mm for straight flues or 125mm for flues with bends or offsets. This fireplace requires a flue pipe of 125mm in diameter to operate.

Liners should be installed in accordance with their manufacturers instructions. Appropriate components should be selected to form the flue without cutting and to keep joints to a minimum. Bends and offsets should be formed only with the matching factory-made components. Liners need to be placed with the sockets or rebate ends uppermost to contain moisture and other condensates in the flue. Joints should be sealed with fire cement, refractory mortar or installed in accordance with their manufacturers instructions.

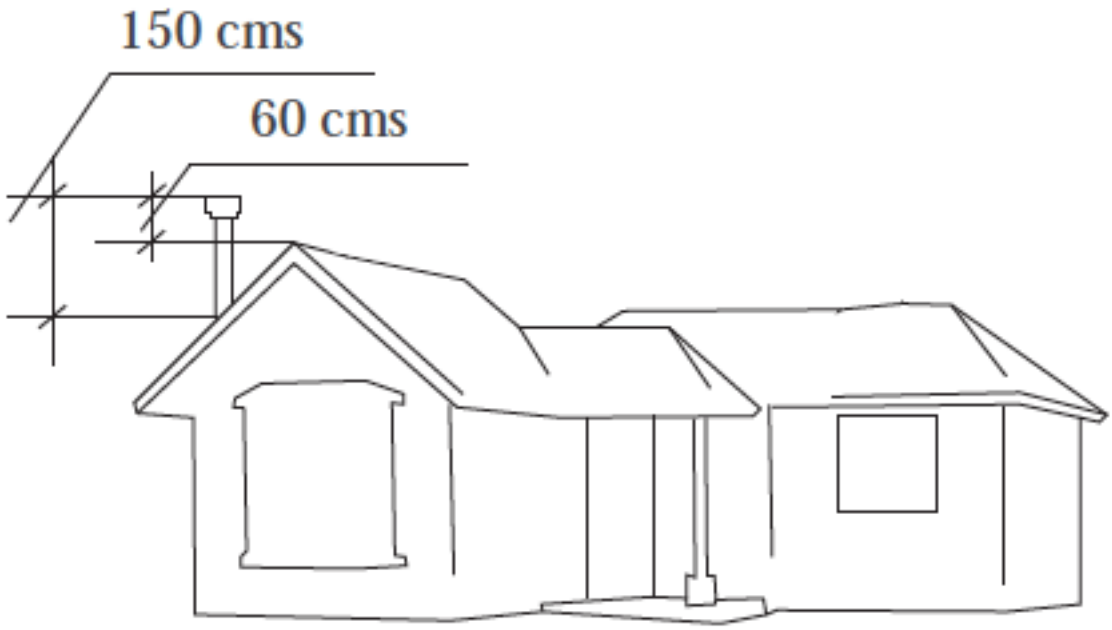
Ensure the joints are completely sealed, as air leakage will lead to poor performance. Avoid having more than two bends in the flue system. Any offset between bends should be minimized and the flue should be equipped with suitable access doors for inspection & cleaning.

THIS FIREPLACE MUST NOT BE INSTALLED INTO A CHIMNEY THAT SERVES ANY OTHER HEATING APPLIANCE. THERE MUST NOT BE AN EXTRACTOR FAN FITTED IN THE SAME ROOM AS THE FIREPLACE, AS THIS CAN CAUSE THE FIREPLACE TO EMIT FUMES INTO THE ROOM.

FLUE HEIGHT

The chimney height and the position of the chimney should conform to the manufacturers recommendations. Flues should be high enough to clear the products of combustion. The height necessary for this will depend on the type of the appliance, the height of the building, the type of flue and the number of bends in it, and an assessment of local wind patterns. However, a minimum flue height of 4.5m could be satisfactory. External flue pipes should be ‘twin wall’. These retain the heat, enabling it to rise and disperse from the chimney. See diagram below for effective flue height recommendations.

The outlet from a flue should be above the roof of the building in a position where the products of combustion can discharge freely and will not present a fire hazard, whatever the wind conditions.



BENDS IN FLUES

Offsets in flues are only acceptable if the following rules are respected:

a) The chimney system shall have no more than 4 bends in total; - 2 bends in the chimney and 2 bends in the flue pipe connection.

b) The offset shall provide a change of direction no more than 45 degrees from the vertical.

c) The run of the chimney between bends shall not exceed 20% of the total chimney length.

d) The maximum length of the horizontal flue must not exceed 150mm (6”).

INSPECTION & CLEANING

Check that the chimney is in good condition, dry and free from cracks and obstructions. The diameter of the chimney should not be less than 150mm and not more than 230mm. If any of these requirements are not met, the chimney should be lined by a suitable method.
The chimney must be swept before connection to the fireplace. Where the chimney is believed to have previously served an open fire installation, it is possible that the higher flue gas temperature from the fireplace may loosen deposits that were previously firmly adhered, with the consequent risk of flue blockage. It is therefore recommended that the chimney be swept a second time within a month of regular use after installation.

Assuming that when the fireplace is first installed, the chimney is clean, and sound, then the chimney flue should be inspected part way through the burning season to establish the regularity of sweeping required. If you have any doubts about the suitability of your chimney, consult your local dealer/stockiest.

AIR FOR COMBUSTION

Any room or space containing a fireplace should have a permanent air vent opening of at least the sizes shown in the table below. For fireplaces designed to burn a range of different solid fuels, the air supply should be designed to accommodate burning the fuel that produces the highest heating output.

FIREPLACE AIR SUPPLIES	
Stove with no flue draught stabilizer	**Permanently open vents as below:** If design air permeability>5.0m3/(h.m2) then 550mm2/kW of appliance rated output above 5kW If design air permeability<5.0m3/(h.m2) then 550mm2/kW for balance of appliance rated output

There must always be a permanent means of providing air for combustion into the room in which the fire is installed. A permanent vent with a total free area of at least 550mm2 for every kW rated above 5kW should be connected directly to the outside air or an adjacent room which itself has a permanent vent of the same size direct to the outside air**. The fitting of an extractor fan to either of these rooms is not permitted.**

CONNECTION TO THE CHIMNEY

This MUST be carried out by an accredited/competent person and/or approved by your local authority before using the fireplace.

Any existing flue must be in good condition with suitable access for collection and removal of debris.

It is also important that suitable flue pipe complying with manufacturer recommendations is used to connect the fireplace to the chimney flue and that suitable access is provided into the

flue for regular inspection and sweeping of the flue ways.

Chimneys should be as straight as possible. Horizontal runs should be avoided except where the rear outlet of the appliance is used, in which case, the horizontal section should not exceed 150mm (6 inches) in length.
Refer to the typical installation diagrams, Fig 7-9. Flue connections must be well sealed.

A non-combustible register plate minimum 1.5mm thick should be fitted to all installations between the flue and the building structure.

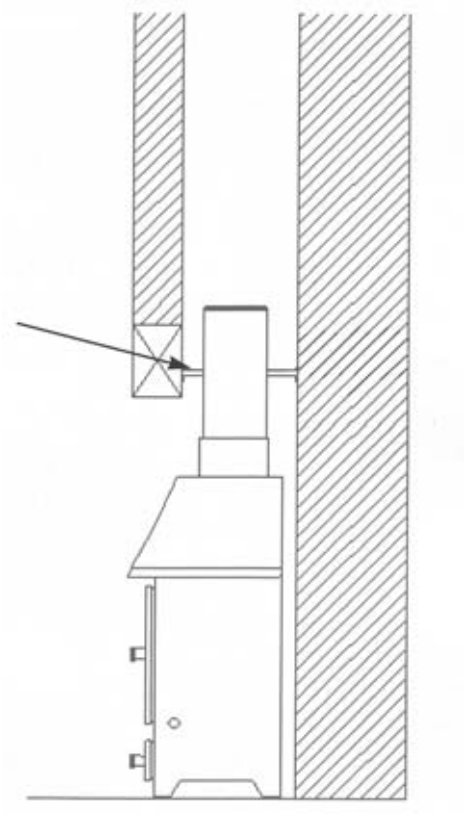


Fig 8: Horizontal register plate with top flue connection

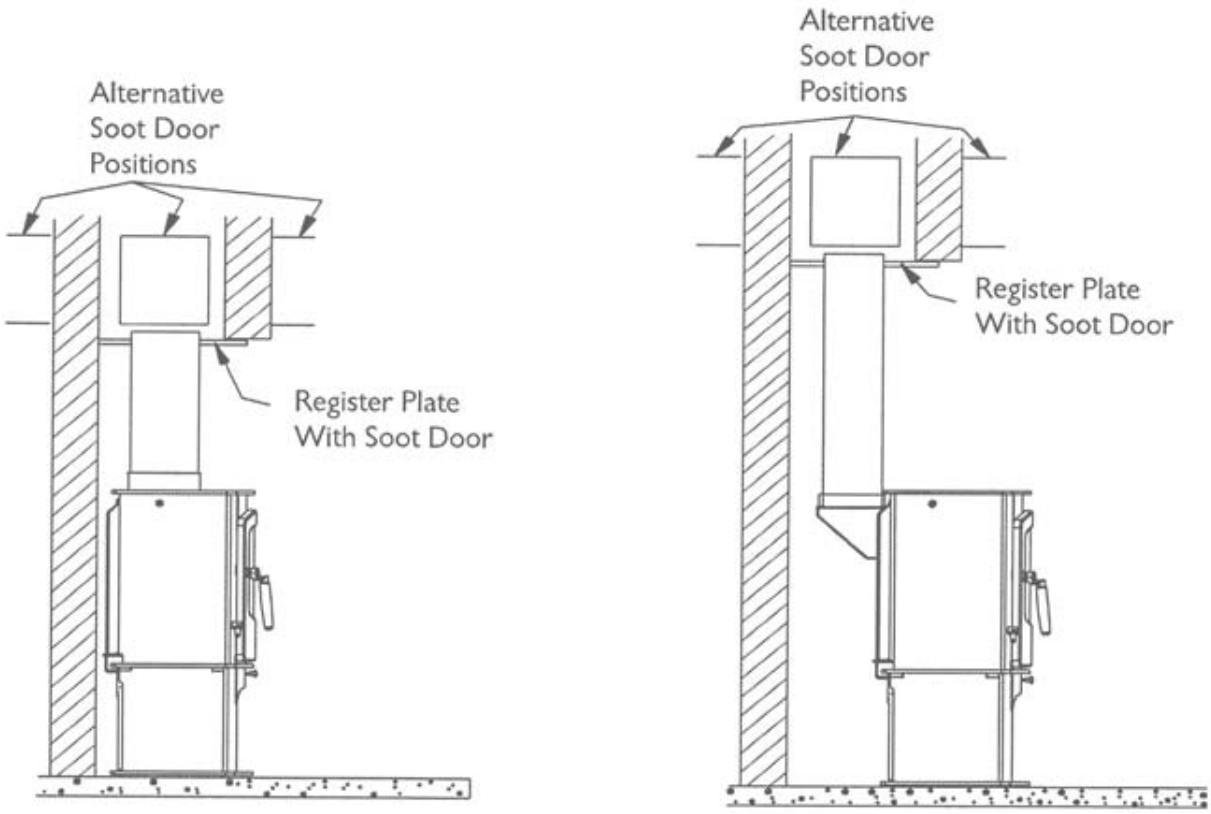


Fig 9: Horizontal register plate with optional vertical rear flue connection

There are several ways of connecting the fireplace to the flue as shown in Figures 8 & 9. If the vertical rear flue is used, the chimney may be swept through the appliance. If it is not possible to pass the sweeps brush through the fireplace, a soot door will be necessary. This may be either in the actual brickwork of the chimney or fitted in the register plate. Various suitable positions of soot doors are shown in Figures 8 & 9.

CLEANING THE FLUE

Access for cleaning the flue should be incorporated in the system other than through the appliance (e.g. a soot door or access through a register plate).

Purpose-made soot doors and inspection lengths are available from your local fireplace specialist or installer. Ensure that the whole length of the flue can be reached from the soot door.

FUME EMISSIONS

To avoid chimney problems, your fire should not be burnt slowly for longer than 12 hours without a period of fast burning. Properly installed and operated, this fireplace will not emit fumes. Occasional fumes from de-ashing and refueling may occur. Persistent fume emission must not be tolerated. If fume emission persists, the following immediate action should be taken:

1. Open doors and windows to ventilate room.
2. Let the fire out, or eject and safely dispose of fuel from the fireplace.
3. Check for flue chimney blockage and clean if required.
4. Do not attempt to re-light the fire until the cause has been identified and corrected.

If necessary, seek professional advice.

Important! Never fit an extractor fan in the same room as this fireplace.

USING YOUR FIREPLACE

THE CONTROLS

The amount of heat emitted by the fireplace is regulated using the following air controls:
• The primary air supply is controlled using the air regulator built into the front ash door (all models) and by the regulator in the feed door (Extra Large only).
• A further air supply is controlled by turning the butterfly damper mounted at the top of the fireplace to provide an up draught to the chimney

WARNING: THE TEMPERATURE REACHED BY THESE ITEMS DURING OPERATION MAY CAUSE AN INJURY TO AN END-USER. AS THESE ARE INTENDED TO BE ADJUSTED DURING OPERATION, IT IS RECOMMENDED THAT PROTECTIVE GLOVES ARE WORN WHEN HANDING THESE PARTS.

TYPES OF FUEL

Fuel should be dry and timber should be well seasoned (at least one year) so as to have moisture content below 20%. The use of damp wood will result in more soot and tar deposits being left in the chimney, flu and fireplace, and will not release heat if thermal energy is being used to drive out moisture from the fuel.

Other fuels can be used in this fireplace are house coal, anthracite and briquettes. Do not use the fireplace to incinerate other materials including household waste. Do not use liquid fuels or accelerants in this fireplace.

Avoid using ‘green’ unseasoned wood, treated wood such as telegraph poles, or plywood / chipboard containing glues and resins which pollute the environment and cause the fire to burn too quickly. Such materials can produce excessive tar or creosote which can be damaging and in extreme cases cause a fire inside the chimney. Looking at the end of the log can assess the dryness of wood. Radial cracks, deep enough to be considered as splits should be present in dry, seasoned logs. This level of dryness may take up to two years to achieve.

The maximum length of fuel suitable for this fireplace is approx. 25cm so as to lay flat over the embers, and logs of greater than 6 cm diameter should be split.

INITIAL SEASONING

Following installation, and before regular use, the fireplace must be seasoned to prevent cracking of the metal casting. This procedure should also be followed if the fireplace has not been used for prolonged periods (during the summer months for example), and is carried out as follows:

1. Light a small fire in the middle of the fireplace, well away from the sides. This should be done for 30 minutes.
2. Allow the fireplace to warm up slowly and evenly with the air controls almost closed, avoiding intense flames.
3. Keep the fire burning for another one hour or so, gradually increasing the size of the fire using larger logs, which will burn naturally but slowly, keeping the fireplace on a low setting.

Full strength fires should not be used until completion of approx. 20 days of mild use. Only from this time will the fireplace have been properly seasoned. It should be remembered that this procedure should be carried out at the beginning of each season of use in order to remove the moisture retained by the metal during the period of non-use. When used for the first time the fireplace may smell a little, due to gas being given off. The gas is not toxic but the room should be thoroughly ventilated.

Let the fire burn with a high draught until no smells can be detected.

Take care not to open the fireplace doors too vigorously in case of causing smoke spillage. If smoke spillage occurs after the fire door has been opened this could be due to poor chimney draft. SEE TROUBLESHOOTING.

FIRE-LIGHTING WITH WOOD

1. Open the air controls.
2. Lay firelighters or rolled up newspapers on the grate with a reasonable quantity of dry kindling wood. Place 2 or 3 small logs on top.
3. Light the newspaper or firelighters using a long taper and close the door.
4. When the fire is burning strongly, add further logs up to 10 mm diameter.
5. When the fireplace is really hot, close the front air control as required. Ensure there are lasting flames until the wood becomes charcoal.

NB: Coal needs a consistent and greater amount of air from the bottom air vent to burn correctly.

REFUELLING

1. Always open the doors slowly to avoid a sudden rush of intake air and smoke escaping into the room and add fuel.

2. Open the air controls and leave open for a few minutes to allow the gasses in the wood to burn before closing the air controls.

• The rate of refueling and heat available are dependent upon individual requirements based upon the user's experience. When re-loading, it is normally necessary to burn the fireplace fast initially, to drive off any gasses and moisture, before closing the air vents to control the burn rate.

• Ensure the doors are kept closed to contain fumes except when lighting up, re-fuelling or removing ash.

• It is not recommended to leave the fireplace alight at night or to continue using the fireplace in mild weather, which gives poor combustion leading to a greater buildup of soot.

• If overnight burning is required, can best be achieved by first driving off any gasses or moisture as usual, following a full charge of fuel and then closing the air vents fully. Experience will indicate the optimum setting.

However, by reducing the burn rate to such a level that the fire is still burning the following day, the burning process creates heavy, tarry chemicals which will become deposited on the inside of the flue or chimney. This is an inefficient process, which greatly increases the risk of a chimney fire and makes it necessary to sweep the chimney more often.

ASH REMOVAL

Keep the fireplace free from a heavy buildup of ash. The frequency of this is dependent upon the type and quality of fuel being used. Ash should be removed before it builds up to the underside of the grate, at which point, the grate would be burning hot on both sides, shortening its life expectancy.

When disposing of ashes, ensure they have cooled and always place in a metal container. Be sure to remove the ash when the fire is at its lowest point, such as first thing in the morning.

ACCESSORIES

Refer to the Megamaster website www.megamaster.co.za for a full range of flue kits, flue pipes and other accessories for use with this classic cast iron fireplace.

If disposing of this product or any damaged components, do not dispose of with general waste. Metal products should be taken to your local civic amenity site for recycling of metal products.

TROUBLESHOOTING

1. **Smoke comes out of the stove when the loading door is opened.**

   - The chimney cavity into which the 125mm flue pipe has been installed may be less than the minimum 150mm requirement.

   - Deposits (soot) may have built up in the chimney and be restricting the flow of waste products.

   - This flow rate is known as the "draw".

2. **The stove does not produce the expected heat into the room.**

   - A register plate may not have been installed.

   - Has the register plate been sealed to prevent heat being drawn out the chimney to waste?

   - Green or wet wood is being burnt.

   - The chimney has excessive draw (this is unusual). Seek installer advice with regard to installing a Flue Draught Stabilizer.

     The stove has been recessed into the existing fireplace and a lot of heat is absorbed in the surrounding fireplace walls rather than being radiated into the room. Pull the stove forward.

   - For the maximum efficiency of heat transference into the room the stove should be sited on the heart off the fireplace rather than recessed

3. **The stove burns too fast.**

   - Use whole logs rather than split ones.

   - The wood being used may be generally too small.

   - The "air-tight" seal between the fiber rope on the doors and the casting may have been lost, adjust door handle lock nuts to reinstate this seal.

   - The chimney has excessive draw (seek installers advice on this point).

   - The fiber rope seal between the door and the glass may be leaking.

   - The glass is not sealed; gently tighten glass-retaining clips. Do not over tighten.

   - The fiber rope on doors and glass has worn out. Replace.

MAINTENANCE

CLEANING

The inside of the fireplace may require regular cleaning, especially during periods of peak use, the frequency of this being indicated by experience. It is advisable to wear a dust mask, protective gloves and safety glasses when cleaning.

WARNING! MAKE SURE THWE FIRE IS COMPLETELY BUNRED OUT BEFORE ATTEMPTING TO CLEAN THE FIREPLACE.

Use a stiff brush and industrial type vacuum cleaner to dislodge and remove as much material as possible, starting at the top of the fireplace and working down to the bottom. Particular attention should be given to the air inlet controls, which can become obstructed.

GENERAL MAINTENANCE

Take this opportunity to check for any damaged parts inside the fireplace. In the event of damage or broken components, please contact Megamaster Customer Service on:

TEL: +27 12 802 1515
Email: info@megamaster.co.za

The fireplace and flue-way should be inspected and maintained when in a cold condition. NO unauthorized modification of this product should be carried out. This fireplace requires regular maintenance by a competent person.

FIREPLACE BODY

The fireplace is finished with a heat-resistant paint, which can be cleaned with a soft brush. Wait until the fireplace has cooled down before doing this. This finish can be renovated with heat resistant fireplace paint, although the paint may not be an exact match and it may be necessary to repaint the complete fireplace.

If the fireplace is purely ornamental, painting will provide a durable, attractive finish. If the fireplace is used for heating, a high temperature heat resistant paint (available from your hardware or paint dealer) must be used, in either aerosol or brush applied form. Should rust become apparent, clean thoroughly with a wire brush and apply a suitable anti-rust treatment.

During prolonged periods out of use, the air inlets should be left open and the door left slightly ajar in order to circulate fresh air and discourage condensation from forming which could encourage corrosion.

CHIMNEYS AND FLUE-WAYS

It is important that the chimney, flue-ways and any connecting flue pipe are swept regularly. This means at least once a year for smokeless fuels and at least twice a year for wood and other fuels. Only wire-centered sweep’s brushes fitted with a guide wheel should be used. If it is

not possible to sweep all parts of the chimney through the fireplace, ensure there is adequate access to cleaning doors.

AIR-WASH SYSTEM

This is a system where secondary air is drawn into the stove (by combustion) through the top vent slide and deflected down the back face of the glass, thus preventing the smoke coming with the glass. It does not mean that you will never have to clean the glass, but substantially lengthens into contact the periods between having to do so.

The air-wash system works best when burning dry wood. Wet and pitchy wood will produce more deposits in the glass. Also deposits will form on the back of the glass when the stove is operated on low heat for extended periods.

To clean the glass, either use an oven cleaning fluid or dip a wet cloth in the wood ash (not coal ash-this may scratch the glass) and gently rub clean. Only do this when the stove is cold.

AIR CONTROLS

Air Wash

The “air wash” is controlled via the top of the stove, it is this “air wash” that keeps a clean an uninterrupted view of the fire, also aiding in good secondary combustion of the fuel and reducing emissions into the chimney and environment.

The riddling grate

The riddling grate allows ash to drop through into the ash pan, therefore allowing the build up of ash to be removed and allow proper circulation of air throughout the stove. When burning solid fuels riddling twice a day is usually sufficient. When burning wood, ash should be allowed to build up and generally weekly riddling will be sufficient .Too much riddling can result in emptying un-burnt fuel into ash pan and should therefore be avoided.

NOTES